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(71) Applicant (for all designated States except US): **BRITISH AMERICAN TOBACCO (INVESTMENTS) LIMITED** [GB/GB]; Globe House, 1 Water Street, London WC2R 3LA (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRAY, Andrew, Jonathan** [GB/GB]; British American Tobacco R & D Centre, Regents Park Road, Southampton SO15 8TL (GB). **STEWART-COX, Adrian, Roy** [GB/GB]; British

American Tobacco R & D Centre, Regents Park Road, Southampton SO15 8TL (GB). **TEARLE, Alan, Douglas** [GB/GB]; British American Tobacco R & D Centre, Regents Park Road, Southampton SO15 8TL (GB). **HOLFORD, Steven** [GB/GB]; British American Tobacco R & D Centre, Regents Park Road, Southampton SO15 8TL (GB).

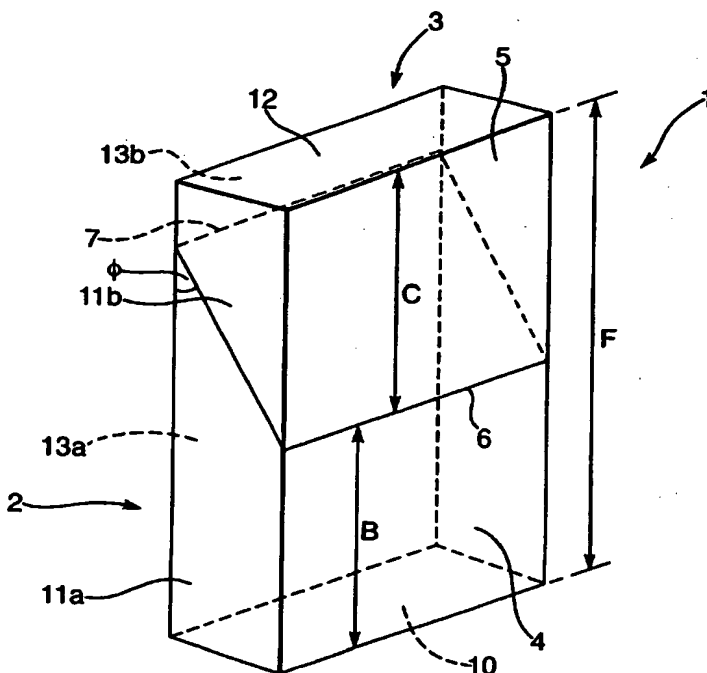
(74) Agent: **WALFORD, Margot, Ruth**; Patents Department, British American Tobacco R & D Centre, Regents Park Road, Southampton SO15 8TL (GB).

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[Continued on next page]

(54) Title: **PACK FOR SMOKING ARTICLES**



(57) Abstract: This invention relates to a smoking article pack. The pack and the inner frame used in combination therewith provide a substantially increased internal surface area for the printing of graphics and/or indicia in order to provide information to the consumer whilst not substantially increasing the surface area of the blank required to make the body of the pack.

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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian

patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Pack for Smoking Articles

The present invention relates to a hinged-lid smoking article pack, in particular, but not exclusively, for cigarettes.

As is well known to those skilled in the art, one of the most commonly used cigarette packs is that usually known as the hinged-lid pack (hereinafter referred to as an "HL pack"). The major components of the HL pack are a base, a lid hingedly connected to the base, and an inner frame. It is usual that the standard HL pack has dimensions such that the front and back walls of the pack are of greater width than the side walls thereof.

The inner frame of the HL pack comprises a front wall and side walls and is positioned within the base of the pack such that a portion of the inner frame projects above the base of the pack and is exposed when the HL pack is in an open position. The exposed portion of the inner frame is substantially covered by the front and side walls of the lid portion of the HL pack when the pack is in a closed position.

In order that consumers receive as much information as possible regarding the product and the brand of smoking articles they choose, it is advantageous that the surface area available to carry such information is maximised.

To date, methods of providing information and advertising have included coupons within or attached to packs. However, the use of coupons involves use of more material than is the case in respect of a standard pack and added complications in pack manufacture.

The present invention has as an aim the provision of a smoking article pack having substantially increased advertising space whilst not substantially increasing the amount of material needed to manufacture the pack, or, indeed, any increase in the amount of material whatsoever.

A further object of the present invention is, whilst providing for increased advertising space, to provide an HL pack for smoking articles having an outward appearance that is not substantially changed from that of a standard hinged-lid pack. The effect may be readily achieved of an outward appearance which is virtually identical to that of a standard HL pack.

In a first aspect thereof, the present invention provides a smoking article hinged-lid pack wherein an angle Φ is less than 30° .

When referred to herein, angle Φ shall be taken as being the angle formed between two straight lines defining, or bounding, Φ , one of which straight lines represents the plane of the rear of the base portion of the pack. The other straight line is, essentially, that straight line which passes through or interconnects the hinge line of the HL pack and the point which

represents the upper edge of the front wall of the base portion. It will usually be the case that the latter straight line will be the line describing the upper inclined edge of the base side wall(s).

According to a first embodiment of the present invention the ratio of the shortest length of the inner frame, between the top edge of the base front wall and the lowest point of the upper edge of the inner frame, to the shortest length of the base front wall, hereinafter referred to as ratio A:B, is greater than that of a standard HL pack.

Preferably the ratio of the shortest length of the inner frame, between the top edge of the base front wall and the lowest point of the upper edge of the inner frame, to the shortest length of the base front wall, that is ratio A:B, is in the range of about 0.15:1 to about 15.0:1.

Suitably the ratio of the shortest length of the inner frame, between the top edge of the base front wall and the lowest point of the upper edge of the inner frame, to the shortest length of the base front wall, is in the range of about 0.15:1 to about 7:1. Preferably the ratio is between about 0.25:1 to about 1.1:1, and is even more preferably in the range of about 0.3:1 to about 1:1.

It will be readily apparent to those skilled in the art that an increase in ratio A:B may be achieved, for example, by decreasing dimension B alone.

According to a second embodiment of the present invention the ratio of the shortest length of the lid front wall, to the shortest length of the base front wall, hereinafter referred to as ratio C:B, is greater than that of a standard HL pack.

Preferably the ratio of the shortest length of the lid front wall, to the shortest length of the base front wall, that is ratio C:B, is in the range of about 35:65 to about 95:5.

Suitably the ratio of the shortest length of the lid front wall to the shortest length of the base front wall perpendicular is in the range of about 35:65 to about 90:10. Preferably the ratio is in the range of about 35:65 to about 75:25 and even more preferably the ratio is in the range of about 40:60 to about 60:40.

It will be readily apparent to those skilled in the art that an increase in ratio C:B may be achieved by, for example, decreasing B alone or, alternatively, by decreasing dimension B and simultaneously increasing dimension C. Preferably an increase in ratio C:B is provided by a reduction in dimension B and a proportional increase in dimension C. It is much by preference that the reduction in dimension B is equal to the increase in dimension C.

The first and second embodiments of the present invention may be used individually or in combination.

According to a second aspect of the present invention there is provided a HL pack for smoking articles wherein the ratio of the shortest length of the inner frame, between the top edge of the base front wall and the lowest point of the upper edge of the inner frame, to the shortest length of the base front wall, hereinafter referred to as ratio A:B, is greater than that of a standard HL pack, the increase in ratio A:B being provided by an increase in dimension A alone.

Preferably in both aspects of the invention the lengths of the inner frame, lid front wall and base front wall are measured perpendicular to the bottom wall, and more particularly the bottom front wall fold line.

In accordance with the first and second aspects of the present invention, it is much by preference that when the pack is in a closed position, the lower edge of the lid front wall is in abutment with the upper edge of the base front wall. The line of abutment of the lower edge of the lid front wall and the upper edge of the base front wall may be substantially parallel to the bottom wall of the pack. In this embodiment of the present invention the vertical height of the pack, F, is equal to the sum of the lengths of the lid front wall, C, and the base front wall, B, which lengths C and B are measured perpendicular to the bottom wall of the HL pack.

Alternatively, when the pack is in a closed position, the lower edge of the lid front wall is in an other than abutting relation with the upper edge of the base front wall. In this further embodiment of the present invention the vertical height of the pack, F, is greater than the sum of the lengths of the lid front wall, C, and the base front wall, B, which lengths B and C are measured perpendicular to the bottom wall of the HL pack.

In accordance with a further alternative embodiment of the present invention, when the pack is in a closed position, the lower edge of the lid front wall is in partial abutment with the upper edge of the base front wall. The line of abutment of the lower edge of the lid front wall and the upper edge of the base front wall may be substantially parallel to the bottom wall of the pack.

That portion of the lower edge of the lid front wall that is in other than abutting relation with the base front wall may overlap a portion of the base front wall or alternatively may be spaced apart from the base front wall such that a portion of the inner frame is exposed when the pack is in a closed position.

The inner frame between the top edge of the base front wall and the upper edge of the inner frame may be printed with indicia and/or graphics only visible to the consumer when the pack is in an open position.

Alternatively, or in addition, the inward facing surface of the lid front wall may be printed with indicia and/or graphics only visible to the consumer when the pack is in an open position.

Suitably, the preferred ratios mentioned herein may be selected in order to provide the required surface area for graphics and/or indicia.

Advantageously, in the closed position, the smoking article pack of the present invention has the appearance of a hinged lid pack for smoking articles.

The present invention further provides a smoking article hinged lid pack blank for forming the body of a pack according to the present invention.

Preferably the surface area of the smoking article HL pack blank (excluding the inner frame) is substantially similar to that of a standard hinged lid pack blank. The surface area of a standard hinged lid pack (excluding the inner frame) when referred to herein shall be taken as being about 21685mm².

Advantageously, the surface area of the smoking article pack blank of the present invention is in the range of about 21675mm² to about 21695mm².

Preferably the surface area of the pack blank is in the range of about 21680mm² to about 21685mm².

In order that the invention may be easily understood and readily carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figure 1 shows a pack according to a first aspect of the present invention, the pack being in a closed position;

Figure 2 shows a pack according to a first aspect of the present invention, the pack being in an open position;

Figure 3 shows a pack according to an alternative embodiment of the present invention, the pack being in a closed position;

Figure 4 shows a pack blank for the body of a pack according to the invention of Figures 1 and 2;

Figures 5 and 6 show an inner frame used in conjunction with the body of a pack of the present invention;

Figure 7 shows a side view of the pack of Figure 3, which pack is shown without an inner frame.

Figure 1 shows a smoking article HL pack 1 in a closed position. The pack 1 comprises a base 2 and a lid 3, the base having a front wall 4, side walls 11a, bottom wall 10

and back wall 13a. The lid 3 has a top wall 12, a front wall 5, side walls 11b and back wall 13b. The base back wall 13a and the lid back wall 13b are connected along hinge line 7. Hinge line 7 is parallel to top wall 12 and bottom wall 10. The base front wall 4 and the lid front wall 5 abut one another at a line of abutment 6 when the pack is in the closed position as shown in Figure 1. When the base front wall 4 and the lid front wall 5 abut one another, as is shown in Figure 1, the vertical height of the pack (F) is equal to the sum of the shortest length (C) of lid front wall 5 and the shortest length (B) of the base front wall 4. Figure 1 shows a pack 1 in accordance with a first aspect of the present invention, the pack 1 having an angle Φ , which angle Φ is formed between two straight lines, one of which straight lines represents the plane of base back wall 13a. The other straight line is that straight line which interconnects the hinge line 7 of the HL pack 1 and the point which represents the upper edge of base front wall 4.

According to one embodiment of the invention, the ratio of the shortest length (C) of the lid front wall 5, perpendicular to the bottom wall 10, to the shortest length (B) of the base front wall 4 perpendicular to the bottom wall 10, is such that there is provided an increased internal surface area for the printing of indicia and/or graphics. The internal surface area may be provided by means of an inner frame, such as that shown in Figures 5 and 6. Alternatively, or in addition, the increased internal surface area may be provided by means of the inward facing surface of the lid front wall 5.

Figure 2 shows a smoking article HL pack 1 according to one embodiment of the present invention in an open position. In Figure 2 the same reference numerals are used as in Figure 1 denoting the same features. In this embodiment, lid back wall 13b and base back wall 13a (not shown) are hinged around hinge line 7 so as to open the pack 1 and expose inner frame 8. According to one aspect of the invention, the shortest length (A) of the inner frame 8, perpendicular to base bottom wall 10, between the line of abutment 6 and the lowest point of the upper edge of the inner frame 9, is such that the exposed surface of the inner frame 8 may be printed with indicia and/or graphic art.

Alternatively, or in addition, the inward facing surface of lid front wall 5 may be printed with indicia and/or graphic art.

Figures 3 and 7 show a smoking article HL pack 1 according to an alternative embodiment of the present invention in a closed position. In Figure 3 the same reference numerals are used as in earlier Figures denoting the same features. In this embodiment the lower edge of lid front wall 5 is spaced apart from base front wall 4 and a portion of the inner frame 8 is exposed when the pack is in a closed position. In the embodiment shown in Figure

3 and Figure 7, the vertical height of the pack (F) is greater than the sum of the shortest length (C) of lid front wall 5 and the shortest length (B) of the base front wall 4.

In an alternative arrangement, a portion of the lower edge of lid front wall 5 may be spaced apart from base front wall 4 and a portion of the inner frame 8 is exposed when the pack is in the closed position.

In a further alternative (not shown) a portion, or all of the lower edge of lid front wall 5 may overlap a portion of the base front wall 4 when the pack is in a closed position.

Figure 4 shows a pack blank for the body of a pack 1 according to the invention of Figures 1 and 2. Like numerals have been assigned to the like parts of Figures 1 and 2.

The blank comprises a base front wall 4, a bottom wall 10, base back wall 13a, lid back wall 13b, top wall 12 and lid front wall 5. Base front wall 4 has side margins 14 and side flaps 15 depending therefrom. When the pack is erected, side flaps 15 rest inside side walls 11a and may be glued thereto.

Side walls 11a have bottom margins 16 and base wall inner flaps 17 depending therefrom. When the pack is erected, base wall inner flaps 17 rest inside bottom wall 10 and may be secured thereto. Lid back wall 13b has side margins 18 and side flaps 19. Side flaps 19 have top margins 20 and top wall side flaps 21 depending therefrom. When the pack is erected side flaps 19 rest inside, and are secured to, lid side walls 11b. In addition, top wall side flaps rest inside and may be secured to top wall 12.

In Figure 4 fold lines are shown as solid lines and lines of cut are shown as dashed lines.

In one embodiment of the present invention, when the pack is erected and in a closed position, the top edge 22 of front base wall 4 and the lower edge 23 of front lid wall 5 abut one another at a line of abutment 6 (not shown).

Alternatively, top edge 22 of front base wall 4 and lower edge 23 of front lid wall 5 may be spaced apart when the pack is erected and in a closed position.

The surface area of the blank of Figure 4 is not substantially increased over that of a standard hinged lid pack blank (excluding the inner frame). The surface area of a standard hinged lid pack blank (excluding the inner frame) is about 21685mm².

Figures 5 and 6 show an inner frame 8 to be used in conjunction with the body of a pack 1 of the present invention. The lowest point of the upper edge of the inner frame is shown as 9 in Figures 5 and 6.

CLAIMS

1. A smoking article hinged-lid pack wherein an angle Φ is less than 30° , said angle Φ being the angle formed between two straight lines defining, or bounding, Φ , one of which straight lines represents the plane of the rear of the base portion of said hinged-lid pack and the other straight line is that straight line which passes through or interconnects the hinge line of said hinged-lid pack and the point which represents the upper edge of the front wall of the base portion of said hinged-lid pack.
2. A smoking article hinged-lid pack according to Claim 1, wherein the ratio of the shortest length of said inner frame, between the top edge of said base front wall and the lowest point of the upper edge of said inner frame, to the shortest length of said base front wall, is greater than that of a standard hinged-lid pack.
3. A smoking article hinged-lid pack according to Claim 2, wherein the ratio of the shortest length of said inner frame, between the top edge of said base front wall and the lowest point of the upper edge of said inner frame, to the shortest length of said base front wall, is in the range of about 0.15:1 to about 15.0:1.
4. A smoking article hinged-lid pack according to Claim 3, wherein said ratio is in the range of about 0.15:1 to about 7:1.
5. A smoking article hinged-lid pack according to Claim 4, wherein said ratio is in the range of about 0.25:1 to about 1.1:1.
6. A smoking article hinged-lid pack according to Claim 5, wherein said ratio is in the range of about 0.3:1 to about 1:1.
7. A smoking article hinged-lid pack according to Claims 1 or 2, wherein the ratio of the shortest length of said lid front wall, to the shortest length of said base front wall, is greater than that of a standard hinged-lid pack.
8. A smoking article hinged-lid pack according to Claim 7, wherein the ratio of the shortest length of said lid front wall, to the shortest length of said base front wall, is in the range of about 35:65 to about 95:5.
9. A smoking article hinged-lid pack according to Claim 8, wherein said ratio is in the range of about 35:65 to about 90:10.
10. A smoking article hinged-lid pack according to Claim 9, wherein said ratio is in the range of about 35:65 to about 75:25.
11. A smoking article hinged-lid pack according to Claim 10, wherein said ratio is in the range of about 40:60 to about 60:40.

12. A smoking article hinged-lid pack according to any one of the preceding claims, wherein when the pack is in a closed position, the lower edge of said lid front wall is in abutment with the upper edge of said base front wall.
13. A smoking article hinged-lid pack according to any one of Claims 1-11, wherein when the pack is in a closed position, the lower edge of said lid front wall is in an other than abutting relation with the upper edge of said base front wall.
14. A smoking article hinged-lid pack according to any one of Claims 1-11, wherein when the pack is in a closed position, the lower edge of said lid front wall is in partial abutment with the upper edge of said base front wall.
15. A smoking article hinged-lid pack according to any one of the preceding claims, wherein said inner frame, between the top edge of said base front wall and the upper edge of said inner frame is printed with indicia and/or graphics.
16. A smoking article hinged-lid pack according to any one of the preceding claims, wherein the inward facing surface of said lid front wall is printed with indicia and/or graphics.
17. A smoking article hinged-lid pack, wherein the ratio of the shortest length of said inner frame, between the top edge of said base front wall and the lowest point of the upper edge of said inner frame, to the shortest length of said base front wall, is greater than that of a standard hinged-lid pack, the increase in said ratio being provided by an increase in the shortest length of said inner frame, between the top edge of said base front wall and the lowest point of the upper edge of said inner frame.
18. A smoking article hinged-lid pack according to any one of Claims 2, 3, 7, 8 or 17, wherein each of the shortest lengths are measured perpendicular to the bottom wall.
19. A smoking article hinged-lid pack according to Claim 18, wherein the shortest lengths are measured perpendicular to the bottom wall front fold line.
20. A smoking article pack blank for forming the body of a pack according to any one of Claims 1-16, wherein the surface area of said blank is substantially similar to the surface area of a standard hinged lid pack blank.
21. A smoking article pack blank according to Claim 20, wherein said surface area is in the range of about 21675mm² to about 21695mm².
22. A smoking article pack blank according to Claim 21, wherein said surface area is in the range of about 21680mm² to about 21685mm².
23. A smoking article pack substantially as hereinabove described with reference to Figures 1, 2, 5 and 6 of the drawings hereof.

24. A smoking article pack substantially as hereinabove described with reference to Figures 3, 5 and 6.
 25. A smoking article pack blank substantially as hereinabove described with reference to Figure 4 of the drawings hereof.
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Fig.1.

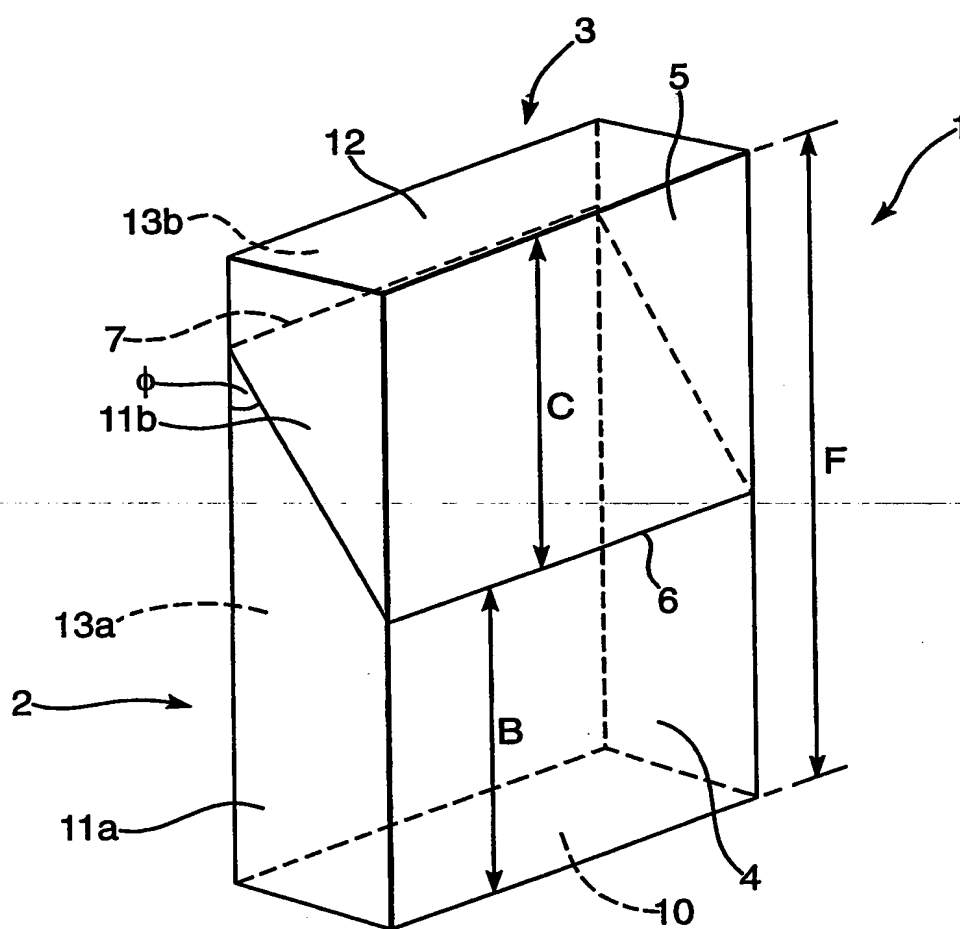


Fig.2.

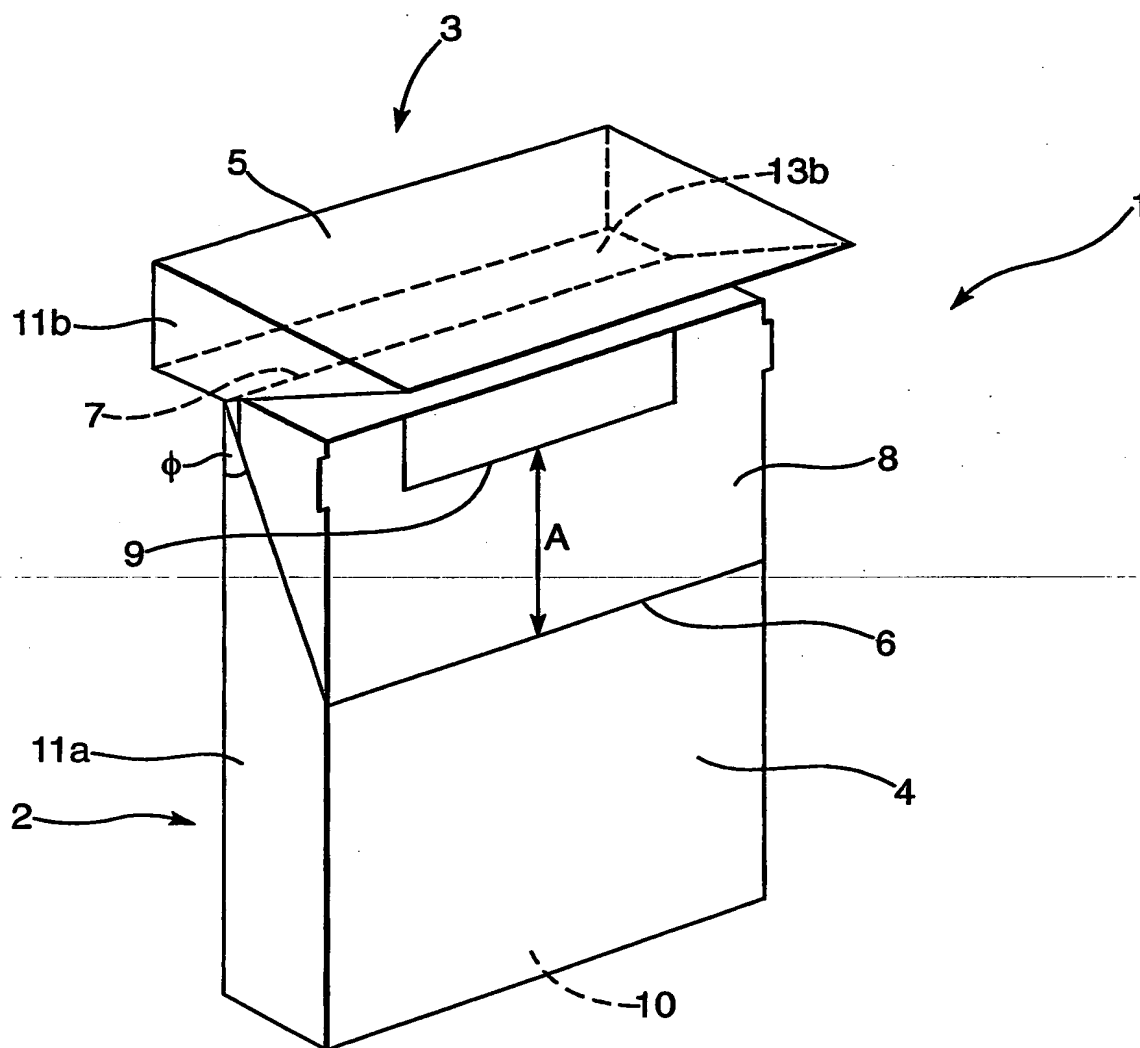
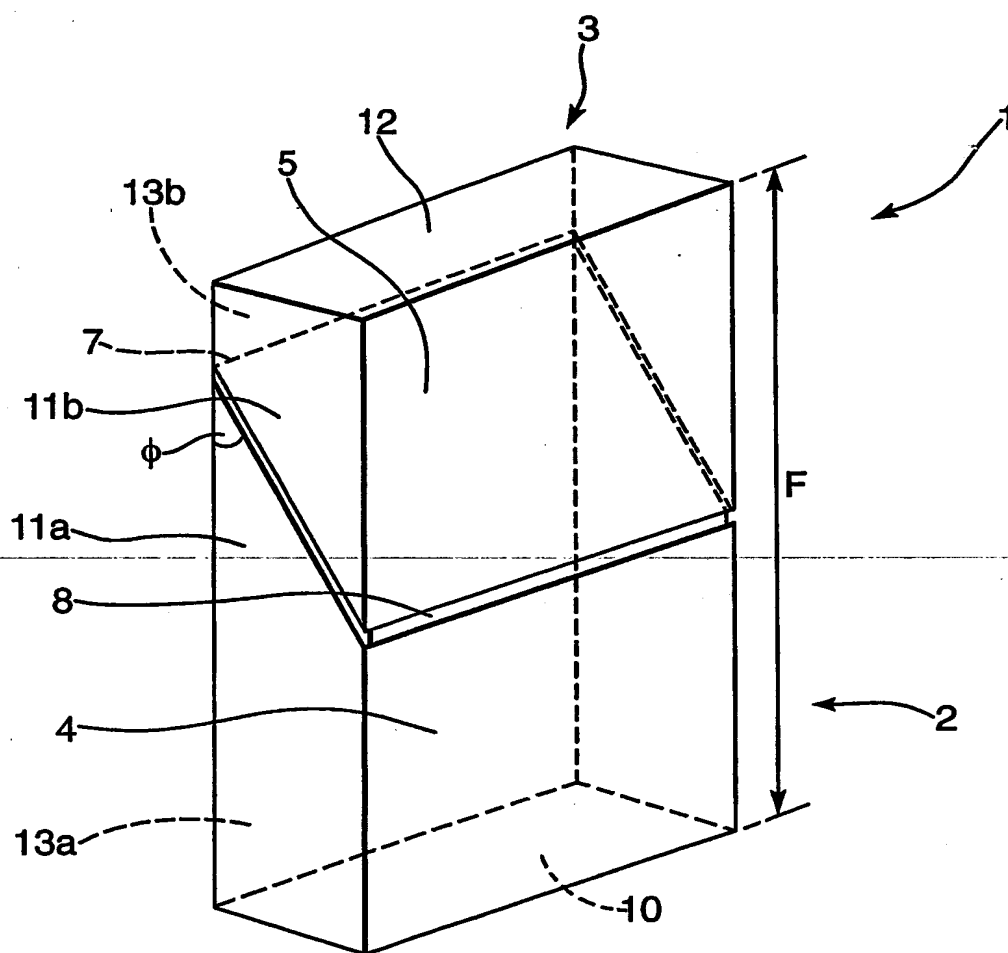
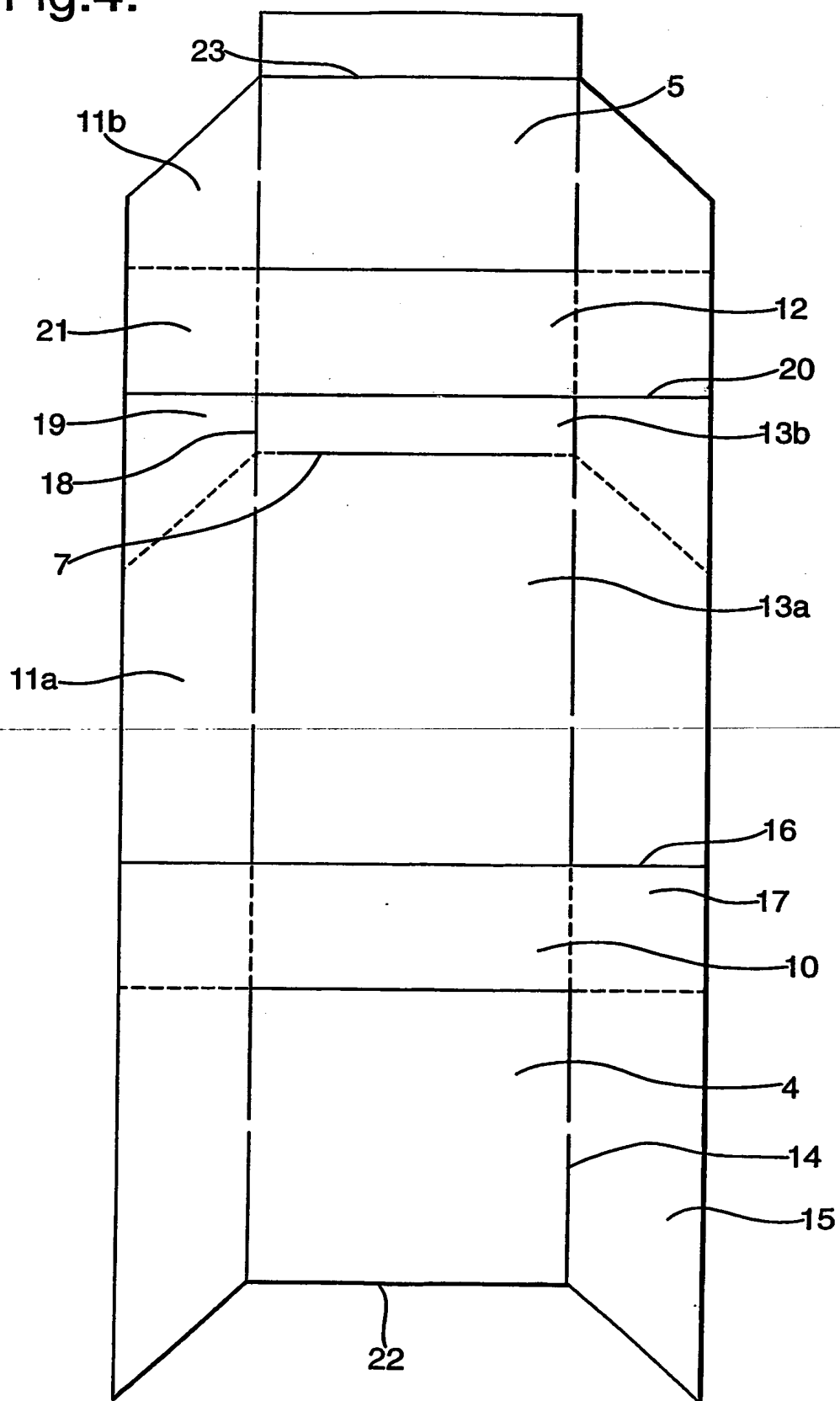


Fig.3.



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Fig.4.



5/6

Fig.5.

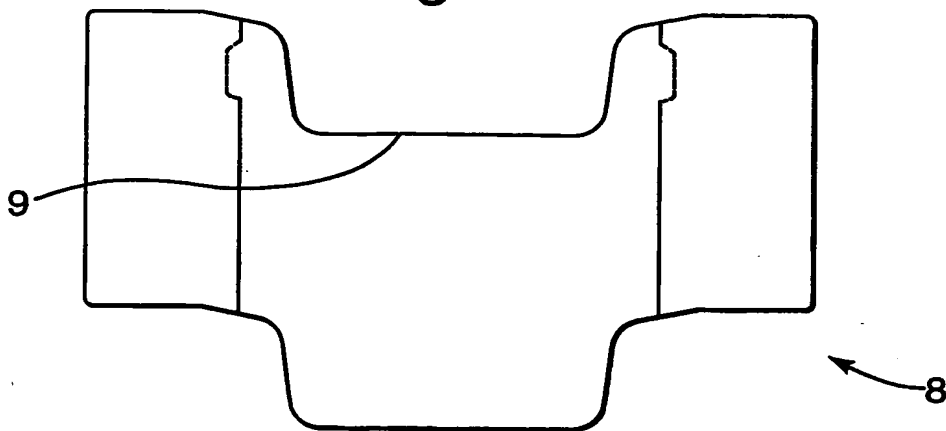


Fig.6.

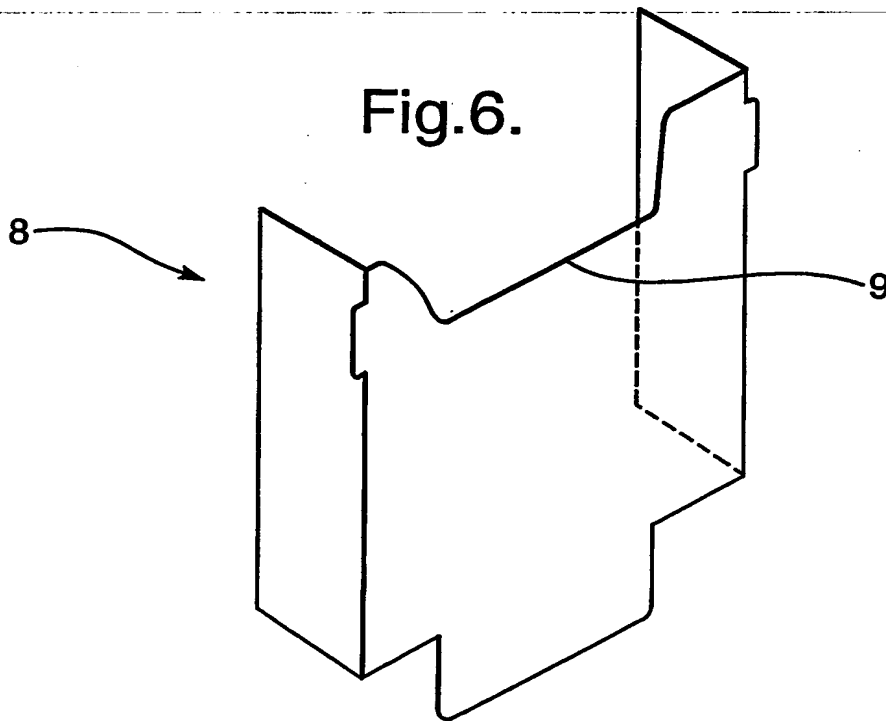
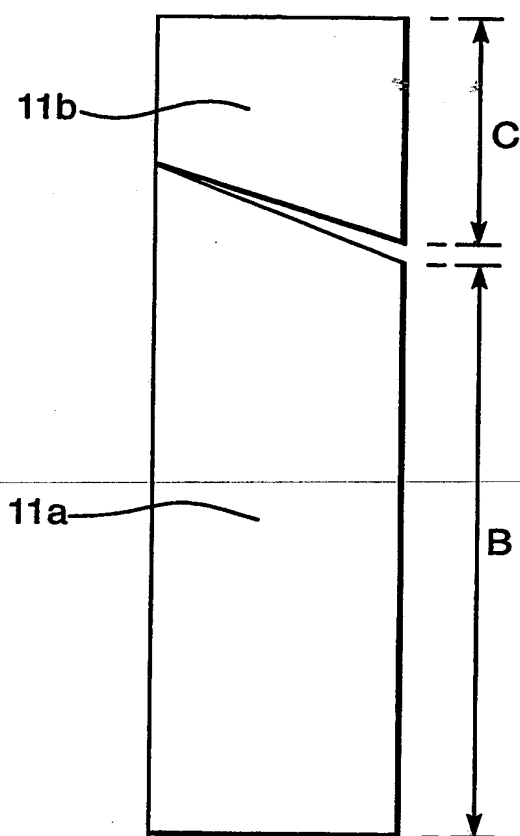


Fig.7.



INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/01026

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65D85/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 09230 A (IMPERIAL TOBACCO LTD) 28 March 1996 (1996-03-28) page 2, line 34 -page 4, line 28; figures 1-9	1,17,20
A	WO 00 05151 A (IMPERIALTOBACCO LTD) 3 February 2000 (2000-02-03) page 3, line 19 -page 5, line 23; figures 1-4	1,17,20
A	DE 199 38 196 A (FOCKE) 22 February 2001 (2001-02-22) column 2, line 9 - line 27 column 3, line 59 -column 4, line 22; figures 5-9	1,17,20
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

23 June 2003

Date of mailing of the international search report

30/06/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Martens, L

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/01026

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 526 317 A (CASSIDY) 2 July 1985 (1985-07-02) figures 1-4,8</p>	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/01026

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 23-25
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 23-25

Rule 6.2.a) PCT

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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